

REMARKS/ARGUMENTS

1. The arguments are not persuasive. In particular, the examiner views the mold case MLD having a bottom side where the LED is inserted into just like the applicant's Figure 3 and 4.

5

Response:

Claim 1 recites a liquid crystal display (LCD) module comprising a housing comprising a plurality of openings formed in a lower surface of said housing, an LCD panel formed within said housing, said LCD panel comprising a display area, a peripheral circuit area formed on said LCD panel, and a plurality of driver integrated circuits formed in the peripheral circuit area of the LCD panel, and a flexible printed circuit board (FPCB) formed on the edge of the peripheral circuit area of the LCD panel, the FPCB having an extending portion and a plurality of light emitting diodes (LEDs) formed below the lower surface of the extending portion. The LEDs of the FPCB would be inset into corresponding openings of the housing when the extending portion of the FPCB crosses the edge of the LCD panel and being deflexed to the lower surface of the housing.

25

The LCD module provided by the prior art necessarily needs two FPCB respectively electrically connected to the LCD panel and the backlight unit.

30

Kang's liquid crystal display device having a flexible circuit board comprises a mold frame 160 used to receive a LCD display panel 140 and a back light assembly 150, a LCD panel 140 formed within the mold frame 160 with the back light assembly 150, a flexible base film 110 having a printed circuit board engaging portion 112 that is to be engaged with a printed circuit board 130 and a liquid crystal panel engaging

portion 114 that is to be engaged with the LCD panel 140. The flexible base film 11 has a driving IC 120 mounted on its center for transferring the driving signals from outside to devices of the LCD panel 140. The flexible base film 110 is bent to wrap around the mold frame 160 and to
5 adhere to the bottom surface of the mold frame 160.

The applicant herein points out structural differences between Kang and the present application are: (1) Kang did not teach that driving IC 120 mounted on the flexible base film 110 could be replaced with the
10 LEDs; (2) Kang's mold frame 160 has **no corresponding openings formed in its lower surface** for allowing the inset LEDs or driving IC 120. The applicant also would like to indicate an electrical difference between Kang and the present application: Kang's flexible base film 110 is used to bear the driving IC 120 and has no electrical connection to the
15 back light assembly 150 which is positioned in the mold frame 160 while the FPCB of the present application is formed on the edge of the peripheral circuit area of the LCD panel. In other words, Kang's LCD device has an electrical connection between the flexible base film 110 and LCD panel 140 but the back light assembly 150 is excluded.
20 Contrary to Kang, the FPCB of the present application has respective electrical connections with the LEDs and the display panel.

Saito disclosed a liquid crystal display device comprising a mold
25 case MLD having receiving or accommodation portions AV1, AV2 for receiving light-emitting diodes LED 1, LED2, a LCD panel PNL, and a printed circuit board PCB on which LED1 and LED2 mounted, the PCB can be hard or flexible printed circuit board. The LED1 and LED2 are received and fitted into the accommodation portions AV1, AV2.

30

The applicant herein points out a structural difference between Saito and the present application: The **accommodation portions AV1**

AV2 are formed in the inner side edge of the mold case MLD, not in the bottom (paragraph [0038]). The mold case MLD is a cannular frame without bottom and is an elastic supporting structure used to hold the light guide body GLB. Although the examiner views the mold case MLD having a bottom side, the bottom side actually is constructed by the printed circuit board PCB which inserts to the cannular mold case MLD with the light guide body GLB and the LED1, LED2. Furthermore, even the mold case MLD has a bottom as the examiner likened, it comprises only ONE opening for holding the LED 1, LED2. In other words, the accommodation AV1, AV2 are part of the opening for biasing the light guide body GLB toward the light-emitting elements while the housing of the present application comprises a plurality of openings.

Based on this structural difference, the applicant believes Saito's mold case MLD cannot be modified to include a plurality of openings. Apparently, the mold case MLD needs spacers to define and separate a plurality of openings if it was modified to include it, but the spacers obstruct the path of the light from the LED1, LED2 to the light guide body GLB. In other words, the mold case 2 fails to bias the light guide body GLB toward the LED1, LED2 in light of this modification. According to MPEP 2143.01 VI. **< THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE** which describes, *"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious."* The applicant asserts that proposed modification of Saito's mold case MLD and LED changes his principle of operation, even makes it malfunctioned.

The applicant herein also points out an electrical difference between

Saito and the present application: The printed circuit board PCB is attached to the mold case MLD by nails NL while the FPCB of the present application attached to the LCD panel without other elements. The applicant also would like to indicate an electrical difference between Saito and the present application: Saito's printed circuit board PCB has no electrical connection to the LCD panel PNL while the FPCB of the present application electrically connected to the LCD panel through the peripheral circuit.

10 As MPEP 2143.01 V. < THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PRUPOSE describes “ *If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the*

15 *proposed modification.*” The applicant asserts that modification of Kang's display and Saito's mold case and LED would deconstruct their intended purpose and operation, therefore no suggestion or motivation could be made. Claim 1 is not obvious by modifying Kang' display to include Saito's LEDs and to further include the Admission's circuits by

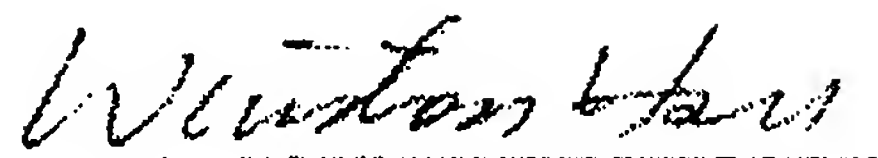
20 the one of ordinary skill in art. All the limitations recited in claim 1 are not taught or suggested by the combined reference teachings either. Reconsideration of claim 1 is politely requested.

Applicant respectfully requests that a timely Notice of Allowance

25 be issued in this case.

30

Sincerely yours,



Date: 05.12.2006

Winston Hsu, Patent Agent No. 41,526

5 P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

- 10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)